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ABSTRACT

Text, illustrations, and exercises are utilized in this set of learning modules to instruct nurses and other health care professionals in the symptoms and treatment of common medical disorders. The first module, by Fern A. Curran, discusses the causes of decubitus ulcers (i.e., bedsores), the physical damage they can do, and methods of preventing their occurrence on bedfast and wheelchair patients. The second module, by Grace Perkins, discusses the causes and symptoms of peptic ulcers to enable the learner to correctly diagnose the condition. The third module, by Ann Sutherland, teaches emergency medical technicians to identify the behavioral responses indicative of a patient's level of consciousness and how to report his/her patient assessment to a physician. The fourth module, by Ruth Traugot, describes eight varieties of shock and teaches students to recognize the signs of early and advanced shock. The fifth module, by Elizabeth J. Naugle, describes the clinical symptoms of respiratory disorders requiring medical attention and the observation of aseptic safeguards against infection. The sixth module, by Jan F. Zlotnick, describes the causes and symptoms of common post-operative respiratory complications. Each of the illustrated modules provides sequential reinforcement exercises with immediate feedback and concludes with a post-test and answer key. The time required to complete each module is specified, ranging from 20 to 50 minutes. (JP)

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HEALTH INSTRUCTION PACKAGES:

NURSING -- SPECIFIC DISEASES AND DISORDERS

MODULES PREPARED BY:

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A PROJECT OF THE LEAGUE FOR INNOVATION IN THE COMMUNITY COLLEGE

RECOGNITION AND PREVENTION OF DECUBITUS ULCERS

By

Fern A. Curran

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TITLE OF PACKAGE:	Recognition and Prevention of Decubitus Ulcers
AUTHOR:	Fern A. Curran
INSTITUTION:	El Centro College, Dallas Texas
INTENDED STUDENTS:	Nursing
ESTIMATED WORKING TIME:	40-50 minutes
MATERIALS NEEDED:	None
REVISED:	September 1, 1977

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This packet is designed to assist you in recognizing cardinal signs of decubitus ulcers or pressure sores. Preventive aspects are also included to assist you, the student, in caring for patients, especially those patients who may be most likely to develop skin problems.

OBJECTIVES OF UNIT

Overall Objective

At the end of this unit, the student will be able to explain how to recognize and prevent decubitus ulcers.

Sub-Objectives

The student will also be able to:

1. Define decubitus ulcers.
2. Locate common sites of pressure sores.
3. Identify risk factors associated with the development of pressure sores.
4. Describe signs of threatened ulcer development.
5. Identify signs of inevitable ulcer development.
6. Describe signs of the developed ulcer.
7. List nursing actions to relieve pressure.
8. Identify nursing measures to keep the patient clean and dry.
9. Assess the patient's nutritional status.
10. Identify nursing actions to help alleviate identified nutritional deficiencies.

PRACTICE EXERCISE #1

The Decubitus Ulcer is known as a pressure sore. It is caused by the pressure of a patient's body on the bed. Immobility (especially in paralyzed and comatose patients), anemia, spasticity, age, malnutrition (hypoproteinemia), infection, even the patient's morale--all are important factors in the development of what are called decubitus ulcers, dermal ulcers, pressure sores, or the common name, "bedsores."

Only the nurse--because of her frequent contact with patients--can have major impact on the decubitus ulcer problem. To be successful, however, the nurse must marshal other hospital personnel, first educating them to the nature and seriousness of the problem, and next by enlisting their help in combating it. Nurse's aides and paramedics, for example, can multiply the nurse's own preventive efforts.

Practice Question #1

a. A decubitus ulcer is caused by _____.

b. The one most able to combat a decubitus ulcer is _____.

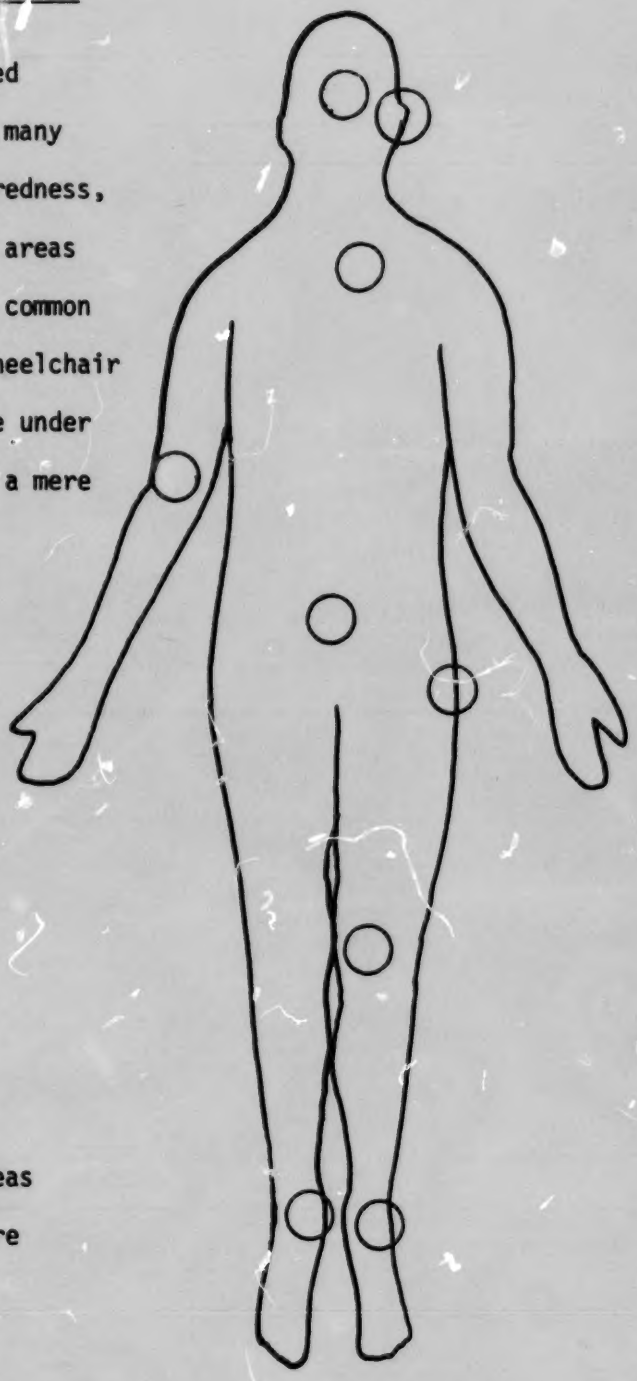
a. If you said a decubitus ulcer is caused by pressure, you are right--the pressure of the patient's body on the bed.

b. If you said the nurse is the one most able to combat decubitus ulcer, you're right again. Good for you!

Now, proceed to Practice Exercise #2.

PRACTICE EXERCISE #2

On these pages, we discuss the established preventive measures, those considered by many institutions as essential in preventing redness, or Stage I of the decubitus ulcer. (See areas circled on diagram.) These are the most common sites of pressure sores in bedfast and wheelchair patients. Redness and softness in tissue under a pressure site have been observed after a mere two hours of patient immobility. The development of a dermal ulcer has been observed within four hours after surgery.



With debilitated patients, special care in the operating room is essential to protect bony prominences from extended pressure during surgery.

Locate on your own body the nine bony areas circled in the above diagram which require special nursing observations and care in preventing skin problems; then, turn the page.

Practice Question #2

Now that you have located these areas on your own body, see if you can fill in the diagram.

Remember:
There are nine areas
to locate!

Check your diagram with that on the previous page. If it looks the same, GOOD!

PRACTICE EXERCISE #3

Pressure is always the villain. Its allies are located body heat, moisture, perspiration, urine, vaginal discharge, and other irritating substances and materials. But its strongest ally is duration--the length of time a patient remains in a single pressure-inducing position.

Young or old, male or female, thin or overweight--all are susceptible. In the aged, especially those suffering from several disease states that discourage or totally prevent ambulation, the frequency of dermal ulceration is alarming.

SUMMARY:

1. Pressure--especially the extent and duration of pressure--is the true enemy.
2. Its allies are:
   - body heat
   - moisture
   - perspiration
   - urine
   - vaginal discharge
   - other irritating substances and materials

   Any of these, plus
3. Duration can cause a decubitus ulcer, or pressure sore.

Practice Question #3

Identify five allies to the development of pressure sores:

1)

2)

3)

4)

5)

Your answer should have included any five of these: body heat, moisture, perspiration, urine, vaginal discharge and irritating substances and materials.

Now that you have identified some of the factors which contribute to the development of pressure sores, please continue on to Practice Exercise #4.

In spite of the high quality of nursing care generally provided in our hospitals and nursing homes, you will still be confronted with decubitus ulcer problems. For example, you can easily "inherit" decubitus problems--ulcers that patients already suffer upon admittance. Also, the decubitus ulcer can and does develop rapidly, in many cases, so rapidly that its early signs are missed as you try to cope with a patient's primary illness. Physicians recognize three stages of development: threatened, inevitable, and ulcer.

STAGE I

Threatened--In this first stage, there will usually be a redness or erythema of the pressure site. However, erythema may be absent if circulation is greatly impaired. The skin and underlying tissue are still soft, and the redness will disappear upon the application of mild pressure.

IMPORTANT: Redness is the first thing you will see!

Practice Question #4

The color of the skin in a threatened decubitus ulcer is _____.

Red is the correct answer. You found that to be an easy question, didn't you?

But your daily preventive routine is what is hard! It is up to you and the people you work with to prevent this redness from ever occurring in the first place! I know that you can do it.

Please read on and see what happens in Stage II.

STAGE II

Inevitable--Now the skin has become dusky--a livid bluish color indicating local cyanosis, a circulatory disorder caused by inadequate oxygenation of the blood. Skin tissue may feel hard to the touch. Blisters at this stage are uncommon but may occasionally be observed.

LOOK FOR CYANOSIS--Another more serious sign.

Practice Question #5

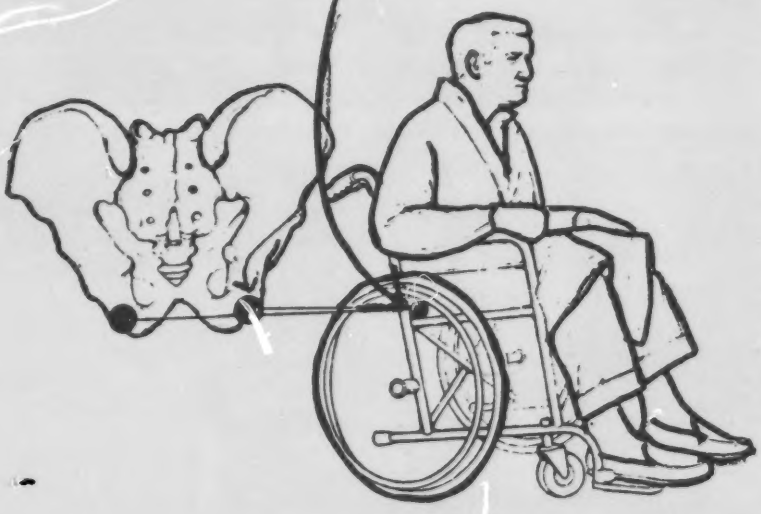
An inadequate supply of oxygen to a pressure site results in a _____ color of the skin.

Bluish is the correct answer. You thought that was an easy answer also, didn't you?

It takes a lot of good nursing care to prevent pressure sores, but even more to help treat them once they develop.

In a bed or chair, a patient's bony prominences exert heavy pressure against small areas of skin, squeezing soft tissue until blood vessels and capillaries collapse. Without adequate blood flow, tissue cells die from a lack of oxygen and nutrients. Ulceration is the visible result of this process.

IMPORTANT: These are dying cells.



Pressure inhibits blood flow, cutting off vital oxygen and nutrients and suppressing the elimination of wastes.

Pressure causes ischemia around the ischial tuberosities of the sitting patient.

Practice Question #6

Pressure cuts down on _____ to an area, and _____ results.

Pressure cuts down on blood flow to an area, and ulceration results.

Is there true caring on the part of those who give nursing care when this condition occurs?

Just thought I'd like you to mull this question over at this point!

Please proceed to see what occurs in Stage III:

STAGE III

Ulcer - First, there is a necrotic breakdown of skin and subcutaneous tissue. If the process continues, the breakdown may involve connective tissue, muscle, and even bone. Dead or necrotic tissue is evident from the time the ulcer is first observed. There is almost always a larger ulcer under the skin than one would suspect, judging from the size of the visible portion. Infection is almost certain.

IMPORTANT!
Note the extensive
damage beneath the skin.

Practice Question #7

a. A _____ breakdown of skin and subcutaneous tissue occurs first. If allowed to continue, the breakdown may spread to connective tissue, muscle and bone.

b. It has been said that there is more than meets the eye when assessing the size of an_____.

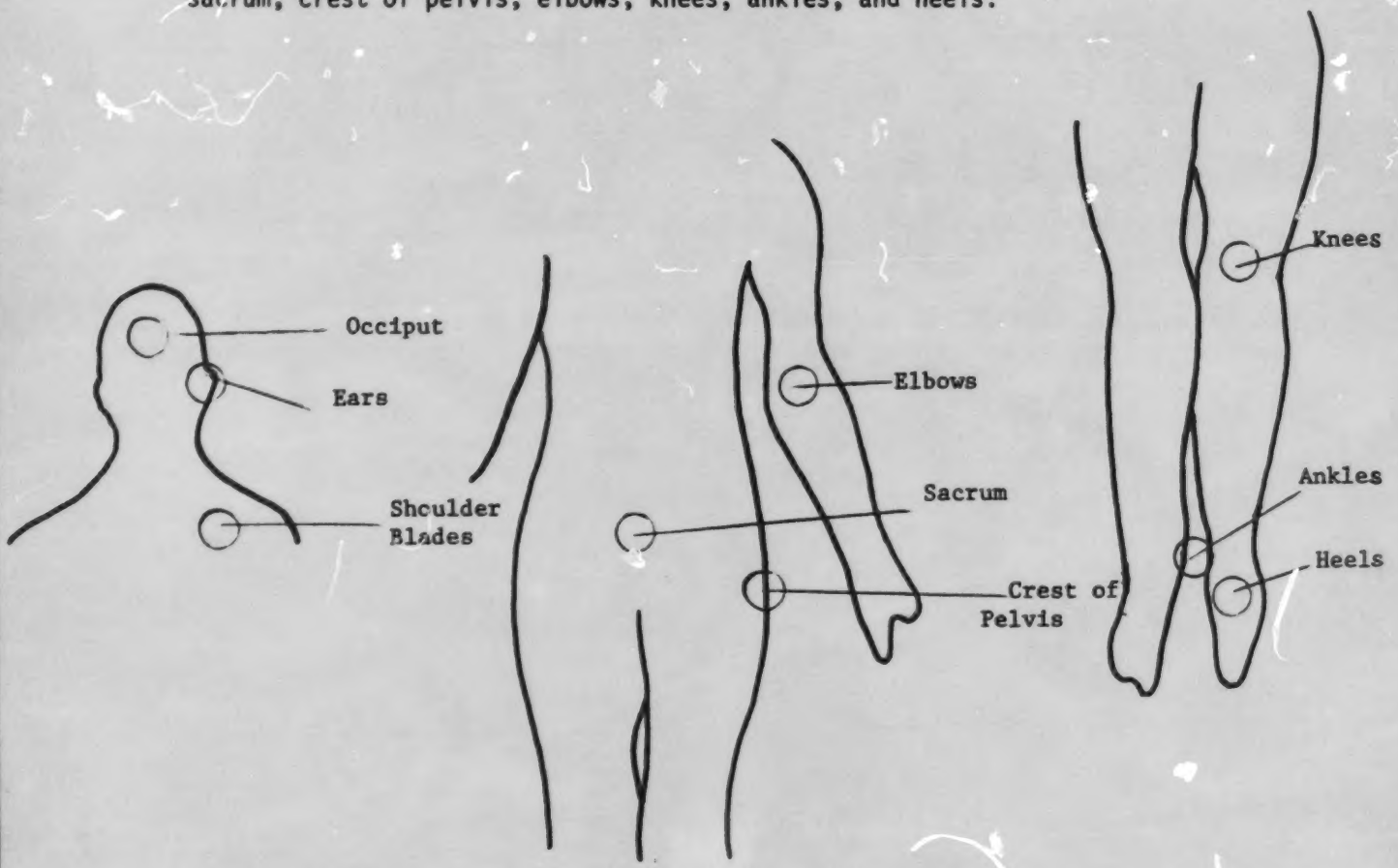
a. Necrotic.

b. The correct answer is decubitus ulcer.

I imagine you had no difficulty answering that question either. Now that you have looked at what can occur in the three stages of skin breakdown, let's lock at those areas once again which are most apt to cover trouble.

PRACTICE EXERCISE #8

Typically, decubitus ulcer attack at the bony prominences of the body. Watch for redness at the occiput (back of head), ears, shoulder blades, sacrum, crest of pelvis, elbows, knees, ankles, and heels.



Practice Question #8

Nursing assessment of the bony prominences for areas of pressure includes the following parts: (Name eight.)

If you were able to write in eight of the nine areas previously mentioned, that is GREAT!

Now let's pull our information together for a few review exercises.

PRACTICE EXERCISE #9

Underlying Damage!

Connective Tissue

Muscle

Bone

Practice Question #9

Underlying body structure may be damaged by a decubitus ulcer. Name three of these structures:

1)

2)

3)

You're right, of course. Three to remember are 1) connective tissue; 2) muscle; 3) bone.

PRACTICE EXERCISE #10

THE MAIN OBJECTIVE--prevention

WATCH FOR THE RED CULPRITS THAT MARK THE BEGINNING OF TROUBLE

Practice Question #10

_____ of the skin is the first sign of a beginning skin problem.

Yes, redness of the skin is the first sign of a beginning skin problem.

Let's continue to the next practice area and review some of the important nursing measures necessary for good skin care and the prevention of pressure sores.

PRACTICE EXERCISE #11

REMEMBER TO DO:

1. Change positions every two hours
2. Keep skin clean and dry
3. Bath patient with mild soap and warm water
4. Dry skin thoroughly
5. Massage skin gently
6. Avoid wrinkled bed linens

If it is not done gently, the very act of turning a patient can abrade the skin and lead to ulceration.

Practice Question #11

Certain nursing actions may prevent decubitus ulcer formation. List these actions below:

1)

2)

3)

4)

5)

6)

If you listed all of those nursing actins without difficulty, can you add some other nursing actions you think are important to remember?

Read on to learn how important it is to turn patients frequently.

PRACTICE EXERCISE #12

For patients unable to move or at risk because of their debilitated condition, establish and post a turning schedule that ensures a full change of body position at two-hour intervals. The complete series of changes must relieve pressure at all potential ulcer sites.

AT AT AT AT

Practice Question #12

Rotation of a patient's position to prevent pressure areas should be done every _____ hours. Why?

I hope you knew a patient must be turned every <u>two</u> hours so that prolonged pressure to any one part of the body will not occur and damage the skin.

PRACTICE EXERCISE #13

Bony prominences of the body can and should be protected by fleece-lined boots, elbow pads, and sheepskin and foam pads. A two-inch thick sponge rubber pad under the legs will relieve pressure on the posterior area of the heel.

Fleece-lined boots

Elbow pads

Sheepskin

Foam pads

For patients who are ambulatory or able to turn, clearly explain the importance of relieving pressure sites. Enlist their aid in prevention. A little verbal recognition and encouragement will often spur them to even greater effort.

Practice Question #13

Overlying skin of bony areas may be protected by the use of the following nursing innovations:

1) 3)

2) 4)

If you answered:

1) Fleece lined boots
2) Elbow pads
3) Sheepskin and
4) Foam pads

then you answered correctly! Good!

Now, let's look at some other measures to protect our patient's skin.

PRACTICE EXERCISE #14

The operative turning frame or the circle bed, if available, will facilitate the repositioning of such immobilized patients as the paraplegic.

Pressure

is

Relieved

The circle bed, which enables a single nurse to follow a turning schedule with ease and safety, is particularly helpful in cases of sacral and ischial decubitus.

Practice Question #14

A circle bed is useful in changing the patient's positions in an effort to prevent undue _____.

Pressure!

Did you get that answer too? Great!

PRACTICE EXERCISE #15

Remember that pressure is intensified when bed linens are wrinkled and when food crumbs, tobacco and other foreign particles are present.

DO GET RID OF:

Linen Wrinkles

Food Crumbs

Tobacco

Foreign Particles

Practice Question #15

The patient's bed should be inspected at frequent intervals for evidence of the following (they may aid the development of pressure sores):

1)

2)

3)

4)

Your answer should be:

Wrinkles

Crumbs

Tobacco

Particles

Can you think of other irritants which might get lost in a patient's bed?

Let's go on now to the next page to see what else there is for us to do to prevent pressure sores from occurring on our patients.

PRACTICE EXERCISE #16

Keep the patient clean and dry.

Maceration--the reduction of tissue to a soft mass through soaking--will speed the decubitus process. Be sure that the patient's skin is kept clean and dry at all times.

Routine care includes keeping bedclothes clean and taut; bathing, as necessary, with mild, non-detergent soap and warm water; thorough drying after baths, and gentle massage with a lotion or Dermassage, to moisturize and lubricate the skin.

After the skin is dry, a zinc stearate or silicone preparation--used sparingly --can be helpful in protecting against sheet burn and perspiration. Avoid thick, occluding ointments.

Many experienced nurses advise against too frequent use of powders and alcohol because of the possibility of skin desiccation. Residual soap, they point out, may also lead to drying and cracking of dermal tissue. Proper rinsing is a vital part of the cleansing ritual.

Incontinence requires special nursing care. If possible, adopt a bowel and bladder management program. Wash and totally dry affected areas after each incident.

Disposable diapers are often helpful in cases of urinary incontinence.

Consult with the attending physician if incontinence is a problem.

Apply a zinc stearate or silicone preparation to protect against sheet burn and perspiration. But use it sparingly.

Practice Question #16

Certain nursing activities are necessary in keeping the skin clean and dry.

Three of these are: 1) 2) 3)

If your answers included three of the following, you made a good grade on this question also.

1) Mild non-detergent soap
2) Warm water
3) Dry thoroughly
4) Bladder management
5) Bowel management
6) Rinse skin thoroughly

WATCH FOR MALNUTRITION

Poor nutrition--particularly the absence of adequate protein--substantially heightens risk.

Often you can detect nutritional deficiencies by noting the patient's general appearance, in particular, the condition of skin, eyes, nail and hair. A blood chemistry analysis for total protein can be of help in establishing the need for a special diet or supplemental requirement.

LOOK	LISTEN	FEEL
Skin	History	Skin
Eyes	of	Nails
Nails	Eating	Hair
Appearance		

A well-balanced diet calls for three meals daily, plus a supplement at bedtime. Many times, however, a patient is more receptive to four or five smaller meals.

Practice Question #17

Malnourishment may be detected through nursing assessment of the:

1)

2)

3)

4)

If you wrote as your answers:

Hair

Eyes

Nails

Skin

Appearance

.....then you answered the last question.

PRACTICE EXERCISE #18

Frequent and consistent fluid intake (as much as a full glass every two hours during the day) will help to maintain adequate hydration.

Be a watcher!
Every
Two
Hours

For healthy skin, adequate hydration is essential. Educate your patient about the need for fluid intake throughout the day.

Practice Question #18

An adequate daily intake of fluids is assured if an 8-ounce glass of liquids is given every _____ hours during the day.

Yes, your answer of every <u>two</u> hours is correct.

Remember! A record of intake may be kept for accuracy.

Now, let's you and I turn to the next page and learn what role good nutrition plays in preventing pressure sores.....

PRACTICE EXERCISE #19

> For the malnourished, consult with the dietician to determine an appropriate high-protein, high caloric, high vitamin diet. As a guide, such diets often provide 1 1/2 times normal caloric intake, but much depends on age, height, and type of malnutrition. The attending physician may wish to supplement with I.V. injections of protein hydrolysates or whole blood.

Rx: Please contact Mrs. Adair, the dietician, and have her arrange a consultation with this patient. Have her call me before she sees patient, please.

M. S. Jones, M.D.

Practice Question #19

The physician should be asked to write an order for a _____ consultation when a patient is suspected of having malnutrition.

If you filled in the blank with dietician, you have answered this question correctly.

PRACTICE EXERCISE #20

In aged patients, the debilitated, paraplegics and the drug dependent, you have immediate cause to suspect malnutrition.

HI PROTEIN

HI CALORIES

HI VITAMINS for the malnourished

Practice Question #20

A diet high in protein, calories, and vitamins is indicated for a person who is _____.

If you filled in the blank with the word malnourished, you got the answer for this question too! Good for you.

One more aspect of nutrition for the malnourished includes meaningful snacks.....

PRACTICE EXERCISE #21

Fortified milk shakes, eggnogs, and other high-protein supplements, served between meals, can be especially beneficial to patients who border on hypoproteinemia.

IMPORTANT: Protein builds and Repairs Body Tissues.

Practice Question #21

The addition of eggnogs and milk shakes to a patient's diet increases the _____ intake.

If you stated eggnog and milk shakes increase protein intake, you are correct.....and that is good!

You have completed this packet.

It is my sincere hope that you have become more aware of the importance of good skin care in the prevention of pressure sores.

Good Nursing Is

Good Skin Care!

Good Luck!

I have enjoyed sharing this time with you.

POST-TEST

1. Another name for decubitus ulcer is _____.

2. Drawing a diagram on the Answer Sheet, locate nine bony prominences which indicate probable areas of pressure conducive to overlying skin breakdown.

3. Identify five risk factors which predispose to decubitus development.

   1) 4)
   2) 5)
   3)

4. Redness or erythema at a pressure site indicates a _____ decubitus ulcer.

5. a. A livid bluish color of the skin is evidence of local _____.

   b. Pressure inhibits blood flow, cutting off vital oxygen and nutrients, and suppressing the elimination of body wastes. As a result _____ _____ occurs in the affected tissue.

6. a. Like an iceberg, the decubitus ulcer is almost always larger than its _____ would suggest.

   b. Decubitus ulcers attack at the bony prominences of the body. List eight of these areas needing special nursing assessment:

   1) 5)
   2) 6)
   3) 7)
   4) 8)

   c. When the decubitus ulcer first develops there is _____ breakdown of skin and subcutaneous tissues.

POST-TEST (continued)

d. Identify three body tissues which may become involved in the breakdown resulting from a decubitus ulcer.

1)
2)
3)

7. a. The first sign of skin pressure is _____ of the skin.

b. Prevention of skin pressure may be accomplished by the following nursing measures:

1) 4)
2) 5)
3) 6)

c. The patient's position should be changed every _____ hours to prevent excessive skin pressure.

d. Appliances used to protect bony prominences from pressure are:

1)_____ 2)_____ 3)_____ 4) _____

e. A special type of bed will facilitate repositioning of patients to relieve pressure and is known as a _____ bed.

f. Pressure on a patient's skin may be intensified by the presence of the following in a patient's bed:

1)
2)
3)
4)

8. List nursing measures to aid in keeping the patient's skin clean and dry:

1)
2)
3)

POST-TEST (continued)

9. Nutritional deficiencies may be assessed through the nurse's observations of:

   1)

   2)

   3)

   4)

10. a. Adequate hydration may require a full glass of fluids every _____ hours during the day.

    b. The nurse should consult with the _____ and the _____ about a malnourished patient.

    c. An appropriate diet for a malnourished person would be high in _____, _____ and _____.

    d. Two high protein dietary supplements are:

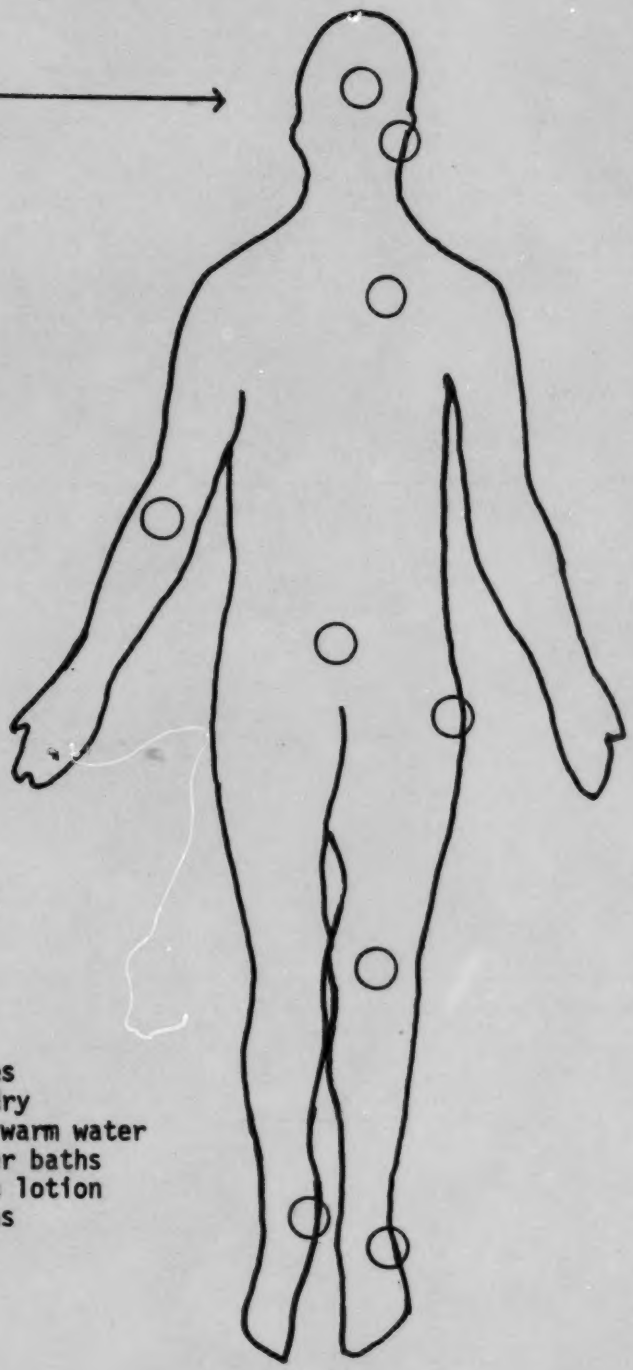
    1)

    2)

ANSWERS TO POST-TEST

1. Pressure sore.

2. ——————————→



3. 1) Immobility
   2) Anemia
   3) Spasticity
   4) Age
   5) Malnutrition

4. Threatened

5. a. cyanosis
   b. death
   c. surface

6. a. surface

   b. 1) occiput
      2) ears
      3) shoulder blades
      4) sacrum
      5) crest of pelvis
      6) elbows
      7) knees
      8) ankles
      9) heels

   c. necrotic

   d. connective tissue
      muscle
      bone

7. a. redness

   b. 1) frequent position changes
      2) keep patient clean and dry
      3) bath with mild soap and warm water
      4) dry skin thoroughly after baths
      5) massage skin gently with lotion
      6) avoid wrinkled bed linens

ANSWERS TO POST-TEST (continued)

c. Two

d. 1) fleece lined boots
2) elbow pads
3) sheepskin
4) foam pads

e. circle

f. 1) wrinkles
2) food crumbs
3) foreign particles
4) tobacco

8. 1) mild non-detergent soap
2) warm water
3) dry thoroughly
4) bladder management

9. 1) skin
2) eyes
3) nails
4) hair

10. a. two
b. physician and dietician
c. protein, calories, and vitamins
d. 1) eggnog
2) milk shakes

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HOW TO NOT MISS A PEPTIC ULCER

By

Grace Perkins

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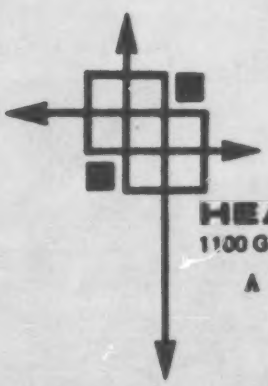
TITLE OF PACKAGE:	How to Not Miss a Peptic Ulcer
AUTHOR:	Grace Perkins
INSTITUTION:	Cuyahoga Community College, Cleveland, Ohio
INTENDED STUDENTS:	Nursing
ESTIMATED WORKING TIME:	20 to 30 minutes
REVISED:	September 1, 1977



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OBJECTIVES OF UNIT

Overall Objective

You will be able to elicit responses and evidence to make a diagnosis of peptic ulcer.

Sub-Objectives

1. Identify the anatomical sites in which a peptic ulcer may develop.
2. Recognize the pH of gastric juice.
3. Recognize the protective mechanisms of the gastric mucosa.
4. List the emotional states that predispose to peptic ulcer.
5. Recognize the important predisposing factors of peptic ulcer.
6. Identify the two most important symptoms of peptic ulcer.

Attitudinal: Students anonymously report that the skills learned in the package are important or worthwhile.

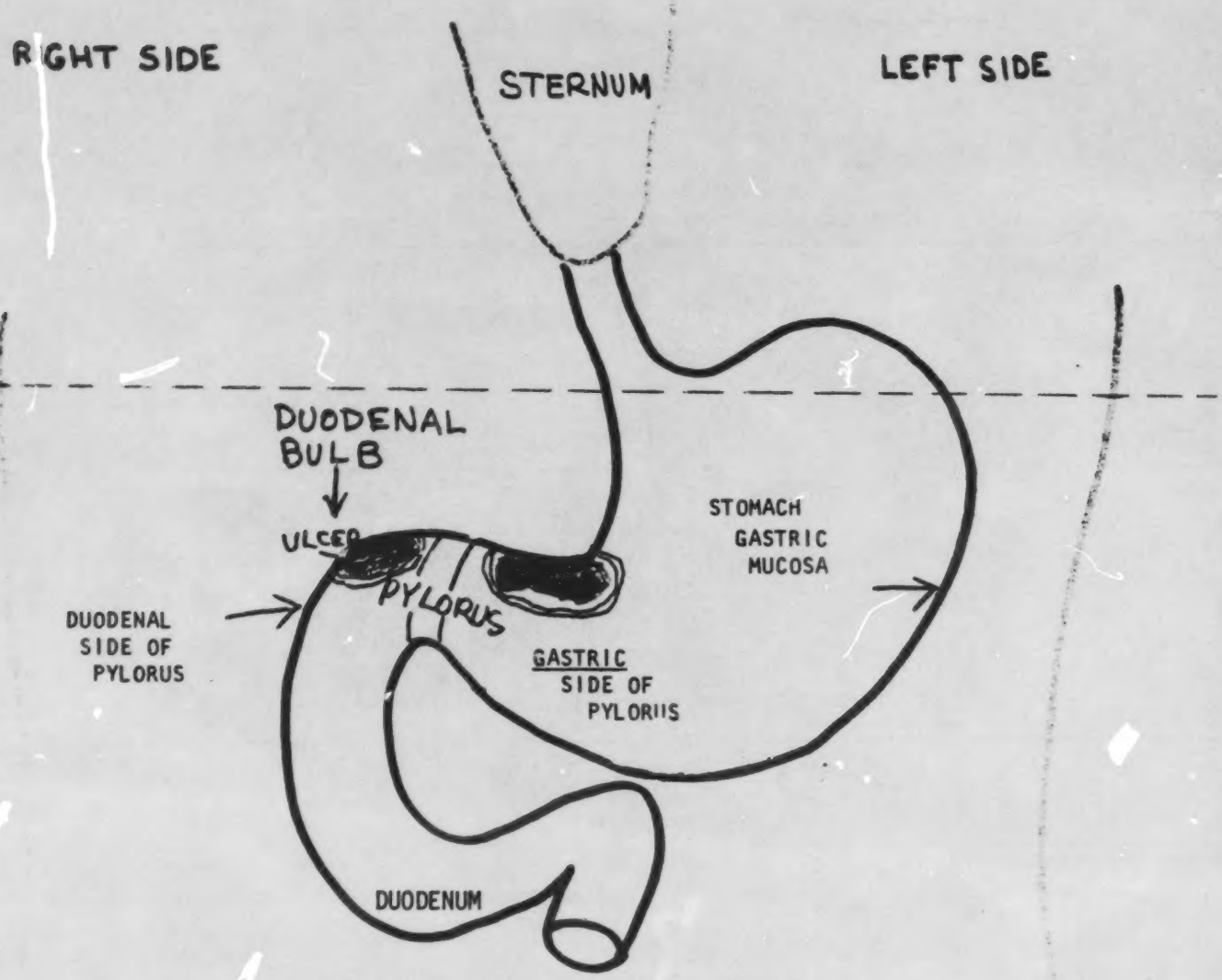
PRACTICE EXERCISE 1

Input

We are going to be studying ways to get responses and evidences of peptic ulcer disease. Peptic ulcers are most likely to be found on the gastric or on the duodenal side of the pylorus as shown in the diagram on page 4. Note how close the red "excavations" or ulcers are to the pylorus - on either side? Besides occurring on either side of the pylorus, a few ulcers may be situated in the pylorus.

Practice Question 1

Peptic ulcers are most likely to occur on either the gastric or duodenal sides of the _____.



PYLORUS IS A SPHINCTER BETWEEN DUODENUM AND STOMACH

Dotted line separates Epigastric Region (above line) from Umbilical Region (below line)

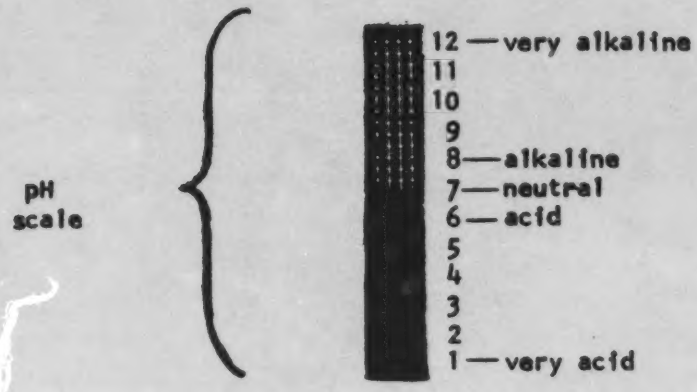
Feedback

PYLORUS - Duodenum near the pylorus; gastric mucosa near the pylorus. Right! Peptic ulcers occur most often in the duodenum but also are likely to occur in the gastric mucosa. Why?! Because these areas are most exposed to hydrochloric acid and pepsin or gastric juice.

PRACTICE EXERCISE 2

Input

The gastric mucosa secretes gastric juice. Gastric juice contains hydrochloric acid. The pH of hydrochloric acid is 1. Consider the following scale:



Other contents of gastic juice raise the pH to between 1 and 2.

Practice Question 2

The pH of gastric juice is normally between _____ and _____.

Feedback

Gastric juice's pH is between 1 and 2. This is very important to consider because an acid with a very low pH can burn through any human tissue, even bone tissue! However, gastric mucosa is protected!

Practice Exercise 3 explains why gastric juice doesn't burn holes right through the stomach and surrounding tissue.

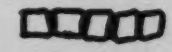
PRACTICE EXERCISE 3

Input

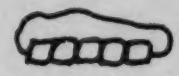
The gastric mucosa* is protected by:

1. Tightly arranged epithelial cells.

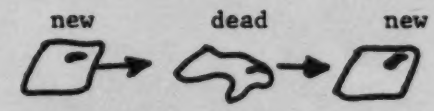
   Example: These are loose cells.

    These are tightly arranged.

2. Cells which make very thick adherent mucus.

    stick um to it!

3. Cells which don't really die: they recreate themselves quickly.

4. An alkaline juice from the pancreas which is added to the gastric juice and neutralizes the acidity in the duodenum.

Practice Question 3

List the protective mechanisms of the gastric mucosa.

a. _____

b. _____

c. _____

d. _____

* See Diagram on Page 4

PRACTICE EXERCISE 3 (Cont.)

Feedback

a. Tightly arranged epithelial cells

b. Cells which make very thick adherent mucus

c. Cells which recreate quickly

d. An alkaline juice from the pancreas

PRACTICE EXERCISE 4

Input

There is a positive relationship between emotions and peptic ulcer disease. See if you can think of common phrases that associate emotions with digestion, food or ulcers. Example: 1. "What's eating you?"

2. "I'm worried sick."

Practice Question 4

There are no really wrong answers, so for fun and understanding, list phrases that associate emotions with digestion, food, or ulcer disease.

a. _____

b. _____

c. _____

d. _____

e. _____

PRACTICE EXERCISE 4 (Cont.)

Feedback

Ask your neighbor if your phrases make sense. Here are some I thought of:

a. "That phrase is meaty."

b. "I'm starved for attention."

c. "I have butterflies in my stomach."

d. "Tell us a spicy joke."

e. "You're a nut."

f. "I feel like a rotten egg."

g. "I have a lump in my throat."

h. "You are a pain in the _ _ _."

i. "You make me sick."

j. "He's the top banana."

k. "She's a cold potato."

l. "She's a cute tomato."

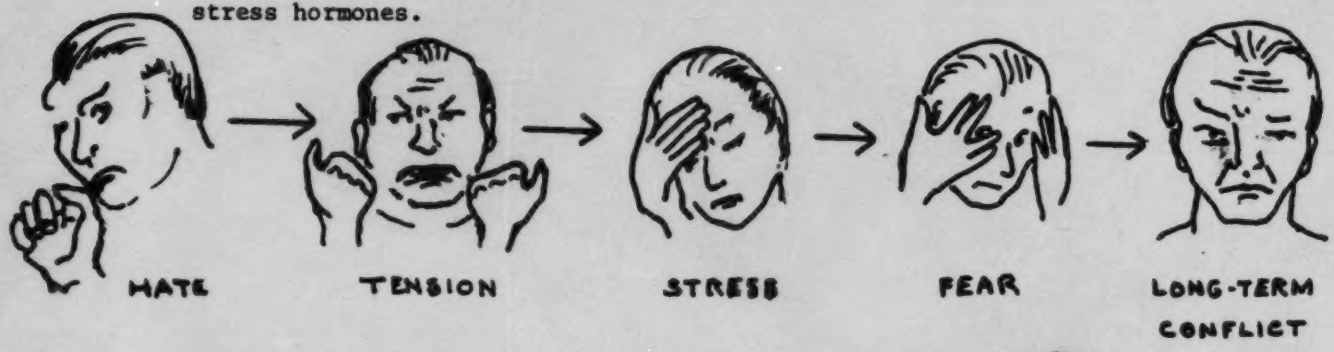
m. "You are the apple of my eye."

n. "My stomach's in knots."

PRACTICE EXERCISE #5

Input

Conflicting emotions, long-term stresses or tensions are a predisposing cause of peptic ulcer disease. These negative emotions stimulate gastric acid secretion and reduce the movement of the stomach. These negative emotions also increase the production of stress hormones.



Long-term conflict stimulates brain cells to send messages to:

1) secrete more acid
2) decrease peristaltic movement
3) increase production of stress hormones

Practice Question 5

The emotional state most likely to predispose one to peptic ulcer disease is _____.

Feedback

Long-term conflict is correct. Of course, other negative emotional states may also predispose one to peptic ulcer disease. Some others are: sustained anger, internalized hostility over a long period of time, chronic frustration and intense and prolonged fear.

PRACTICE EXERCISE 6

Input

There are other important predisposing factors in peptic ulcer disease. These are:

1. eating hurriedly, on the run, and irregularly,
2. certain drugs such as steroids and salicylates,
3. age: 20 to 40 seems to be the largest age group affected, and
4. season: peptic ulcer disease is more common in the spring and fall. The reason for this is unknown.

Practice Question 6

Circle which of the following are predisposing factors in peptic ulcer disease.

a. over 60 age group
b. steroids and salicylates
c. spring and fall seasons
d. 20 - 40 age group
e. the American culture
f. drinking milk

Feedback

b., c., and d. are correct

PRACTICE EXERCISE #7

Input

You are moving through the unit quite well. There is one more very important factor you should know about peptic ulcer disease. That is, the two outstanding symptoms are pain and vomiting.

You will find that your clinical evidence of peptic ulcer disease will be couched in asking the patient if he has pain in the midepigastrium. If your patient has peptic ulcer disease he/she will describe the pain in one or all of the following general descriptions:

1. gnawing sensation in the midepigastrium
2. pain 1 to 3 hours after meals and becomes more severe at the end of the day
3. dull burning in epigastrium and back
4. pain is relieved promptly by bland food or alkalies

An abdominal assessment via this exercise will help. Place your hand on your midepigastrium and give your stomach gentle pressure. If the area is painful (burning or gnawing type), try to remember when you ate last. Has it been an hour or more? If yes, drink some milk, or eat a cracker. Do you have very quick relief? In your clinical laboratory examine patients as you did yourself.

The second important symptom of peptic ulcer disease is vomiting. This information can be elicited by asking three questions.

1. Have you vomited in the last 48 to 72 hours?
2. Do you recall that the vomitus looked like coffee grounds?
3. Did the vomitus follow a bout of severe pain?

If the answer is yes to one or two of these questions coupled with the

criteria of pain, your patient is either pregnant (Just Kidding!) or is likely to have peptic ulcer disease.

Practice Question 7

The two outstanding symptoms of peptic ulcer disease are _____ and _____.

Feedback

You're right--the two outstanding symptoms are pain and vomiting.

Now, please take the post-test.

POST-TEST

There is <u>one</u> correct answer.

1. In which one of the following anatomical sites is a peptic ulcer most likely to develop?
   a. any site that is exposed to hydrochloric acid
   b. the midepigastrium or in the back of the stomach
   c. the duodenum near the pylorus
   d. the greater curve of the lesser duodenal bulb

2. The pH of gastric juice is between
   a. 1 and 2
   b. 3 and 4
   c. 5 and 7
   d. 6 and 8

3. Which of the following protect the gastric mucosa?
   1. tightly arranged epithelial cells
   2. thick adherent mucus
   3. renewal capacity of mucosal cells
   4. alkaline, pancreatic secretions

   a. 1 and 2
   b. 3 and 4
   c. 1, 2 and 3
   d. all of these

4. Which of the following emotional states most predispose a person to peptic ulcer disease?

   a. long-term conflict
   b. mood swings
   c. anger and hostility
   d. short-term depression

5. Which of the following are important predisposing factors to peptic ulcer disease?
   1. emotional stress
   2. eating hurriedly and irregularly
   3. appearance of the disease in the spring and fall of the year
   4. steroids and salicylates

   a. 1 and 4
   b. 2 and 3
   c. 1, 2 and 4
   d. all of these

6. The two most important symptoms of peptic ulcer are
   a. pain and vomiting
   b. hemmorrhage and perforation
   c. pyloric obstruction and anemia

ANSWER KEY

1. c.
2. a.
3. d.
4. a.
5. d.
6. a.

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A PROJECT OF THE LEAGUE FOR INNOVATION IN THE COMMUNITY COLLEGE

ASSESSING AND DESCRIBING DECREASED CONSCIOUSNESS

by

Ann Sutherland

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TITLE OF PACKAGE:	Assessing and Describing Decreased Consciousness
AUTHOR:	Ann Sutherland
INSTITUTION:	Orange Coast College, Costa Mesa, Calif.
INTENDED STUDENTS:	Emergency medical technology
ESTIMATED WORKING TIME:	30 minutes
MATERIALS NEEDED:	None

FIELD TEST COPY

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INTRODUCTION

In your field you are going to come across accident victims, drug overdoses, diabetic coma and many other incidents where there may be decreased consciousness. It is important for you to be able to assess the patient and report your observations promptly to a physician so that he can interpret the patient's level of consciousness.

The single most important indicator of the patient's brain function is his level of consciousness. In assessing the patient, if you know what responses you are looking for and can report these to a physician accurately, this could make the difference between your patient's developing irreversible brain damage or recovering.

Your assessment will be primarily verbal, asking questions and requesting the patient to carry out simple commands. Simple accurate descriptions of the patient's behavior will prevent misinterpretations. The use of such words as "stupor" or "coma" could be very confusing.

OBJECTIVES OF UNIT

Overall Objective

At the end of this package I hope that you can assess a patient, and report the patient's behavioral responses to a physician, so that he in turn can interpret the patient's level of consciousness.

Sub-Objectives

To meet this objective you will learn to:

1. perform the assessment
2. describe the behavioral responses you observe
3. list the seven behavioral responses you will observe as consciousness decreases
4. Show confidence in assessing the patient and reporting the behavioral responses you observe.

PRACTICE EXERCISE #1

If your patient is awake, or conscious, the first step in your assessment is to determine if he is fully alert. A better word for alert is oriented.

1. What day is it? TIME
2. Where are you? PLACE
3. Name a family member or friend who is present. PERSON
4. State his own name or answer to his name. SELF

If the patient can answer these four questions correctly, you would report to the physician that the patient is conscious and oriented.

Now test yourself: you would ask a patient which four of the following questions to determine if he is conscious and oriented?

1) Who is the President of the United States?
2) What is your name?
3) What year was the first moon landing?
4) What is your friend's name?
5) What day is it today?
6) What school do you go to?
7) Where are you?

Feedback

If you answered 2, 4, 5, and 7 you are right. A person who is conscious and oriented will be oriented to time, place, person and self.

You are now ready to continue on to learn about decreased consciousness.

If you did not answer as above, reread this section and retest yourself.

PRACTICE EXERCISE #2

When you ask the patient the four orientation questions and his answers are incorrect, inappropriate, or incoherent, he is disoriented, one of the first signs of decreased consciousness. Remember that intoxication can produce the same responses.

A patient who is conscious but disoriented will often show signs of drowsiness, answer questions more slowly; however, sometimes he will exhibit restlessness. In your report you will state that the patient is conscious and disoriented; if he is also restless you would add this.

Daytime disorientation is more ominous than nighttime as it is easier for the patient to lose track of where he is at night.

Before you continue, check to see if you can recognize which one of the patients below is conscious and disoriented:

1) The patient answers slowly, knows his name is John, recognizes his girlfriend Mary, remembers that he is at Mary's house and that it is Saturday night.
2) The patient is drowsy; it is harder to get a response from him; he responds to his name but he cannot recognize his mother.
3) The patient is drowsy, answers to his name, states it is Wednesday and that he was going to the beach with his friend George.

Feedback

If your answer is two you are right, as this patient could not answer all of the orientation questions, he is conscious but disoriented.

You might now say, "that's fine, but what if the patient cannot respond verbally?" Read on and you will learn how to assess these patients.

If your answer was 1 or 3 reread the last section and recheck yourself on the test question.

PRACTICE EXERCISE #3

If the patient does not respond to your questions verbally, his level of consciousness has decreased below disorientation. It will help the physician to know if the patient can respond to simple commands.

Examples of simple commands would be:

"squeeze my hand"

"raise your arm"

"blink your eyes"

If the patient is able to follow such simple commands, you would report that he is semi-conscious and responds to simple commands.

Now test yourself with the following exercise:

The patient is unable to tell you the day of the week, where he is, and does not respond to his name. The next most appropriate question would be:

1) Who is the President of the United States?
2) Can you squeeze my hand?
3) What year is it?

Feedback

If your answer is 2 you are correct and moving along nicely.

If your answer is 1 or 3 you should reread this section.

PRACTICE EXERCISE #4

If the patient does not respond verbally or to simple commands he is unconscious. This term can mean many different things to the physician, so you need to continue your assessment and see if the patient responds to painful stimuli.

Painful stimuli is best effected by one of the following methods:

1. firmly pinching the muscle between the neck and the shoulder.
2. firmly pinching the inside of the upper arm.
3. firmly pinching the inside of the thigh.

You should note that rubbing the chest with the knuckles can cause bruising. Pricking the skin with a pin can cause infection.

The response evoked by painful stimuli may be purposeful or nonpurposeful. It is important that you can distinguish between these two, as nonpurposeful movements indicate a lower level of consciousness than purposeful movements.

Following is an example of purposeful movement:

The patient trying to withdraw from the painful stimuli, or trying to push away the hand that is producing the stimuli.

Your report would be, the patient is <u>unconscious and responds to pain with purposeful movements</u>.

Following is an example of a nonpurposeful movement;

The patient exhibits a facial grimace when you pinch his thigh, or he moves his leg when you pinch his arm.

Your report would be, the patient is <u>unconscious and responds to pain with nonpurposeful movements</u>.

Note that on testing for response to pain you should check on both sides of the patient's body as one side may have no feeling.

PRACTICE EXERCISE #4 (Cont.)

Complete the following exercise to check that you understand the difference between purposeful and nonpurposeful movements.

Which situation would best describe an unconscious patient who responds to painful stimuli with purposeful movements:

1) You firmly pinch the muscle between the neck and shoulder and the patient grimaces.

2) You firmly pinch the inside of the thigh and the patient tries to withdraw from the stimulus.

3) You firmly pinch the inside of the arm and the patient moves his leg.

Feedback

If you answered 2 you realize that this movement is purposeful as the patient tried to move away from the stimulus. You are ready to continue.

If your answer was 1 or 3, reread this section before continuing.

PRACTICE EXERCISE #5

If you could evoke no response from the patient when you applied painful stimuli, you now test for the corneal and gag reflexes, as these are two of the last responses noted before your patient goes into a deep coma. The physician will need to know if these are present.

To test the corneal reflex:

> Open the eye and lightly brush the cornea with a wisp of cotton. If the reflex is present, the patient will blink. This should not be repeated frequently as it could cause damage to the cornea.

To test the gag reflex:

> Hold the tongue down with a depressor and touch the back of the throat with a cotton swab or depressor. If the reflex is present the patient will gag.

If you find these reflexes are present you would report that the patient is <u>unconscious with gag and corneal reflexes present</u>.

If your patient exhibits no response to these two tests, you would report that he is <u>unconscious and unresponsive</u>.

You have now learned the steps in assessing for decreased consciousness. Can you list the 7 behavioral responses you would be looking for in a decreasing order?

1) _____
2) _____
3) _____
4) _____
5) _____
6) _____ _____
7) _____

PRACTICE EXERCISE #5 (Cont.)

Feedback

If your answer resembles the following you have learned the assessment steps well:

1) conscious and oriented
2) conscious and disoriented
3) semi-conscious - responds to simple commands
4) unconscious - responds to pain with purposeful movements
5) unconscious - responds to pain with nonpurposeful movements
6) unconscious - gag and corneal reflexes present
7) unconscious and unresponsive

If your answer did not resemble the above then reread the package.

You now know how to assess and describe decreased consciousness. Remember that not only is your initial observation important, but the changes that you observe after your initial evaluation may indicate that the patient's level of consciousness is continuing to decrease. You should repeat your observations every 10 to 15 minutes until the patient is turned over to a physician.

You have done very well and should now proceed with the Post-Test.

POST-TEST

FILL IN THE BLANKS

1. One of the first changes you would observe that indicates a change in the level of consciousness would be _____.

2. List the four questions you would ask a patient to determine if he is oriented:

   _____

   _____

   _____

   _____

3. List the 7 behavioral responses you would be looking for when assessing decreased consciousness:

   _____

   _____

   _____

   _____

   _____

   _____

   _____

4. An unconscious patient who attempts to push your hand away when you pinch his inner thigh would be exhibiting _____ movements.

5. With decreased consciousness two of the last responses observed are the _____ and _____ reflexes.

CIRCLE THE ONE BEST ANSWER

6. You find a man lying on the floor; on shaking him you note that he does not arouse. You firmly pinch his inner thigh and he moves his arm. You would describe his response as:

   a. conscious and disoriented
   b. unconscious and responds to painful stimule nonpurposefully
   c. semi-conscious and responds to simple commands
   d. unconscious and responds to painful stimuli purposefully

7. You are talking to a lady who has hit her head on the windshield. She appears dazed but states that her name is Jane, knows that she was on her way to the market with her son and that it is Thursday. You would describe her as:

   a. semi-conscious and responds to simple commands
   b. conscious and oriented
   c. conscious and disoriented
   d. unconscious and responds to painful stimuli purposefully

8. After completing this package, could you explain to a fellow student how to assess a patient for decreased consciousness and describe the observations in behavioral terms to a physician.

   YES _____ NO _____

9. If your answer to 8 is NO, can you explain why?

   _____

   _____

POST-TEST ANSWER KEY

1. disorientation
2. What day is it?

   Where are you?

   Name a family member or friend

   What is your name?
3. Conscious and oriented

   conscious and disoriented

   semi-conscious and responds to simple commands

   unconscious and responds to pain purposefully

   unconscious and responds to pain nonpurposefully

   unconscious, gag and corneal reflexes present

   unconscious and unresponsive
4. Purposeful
5. Corneal and gag
6. b
7. b

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Introduction to Shock

Part I

by

Ruth Traugot, R.N.

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TITLE OF PACKAGE:	Introduction to Shock (Part I)
AUTHOR:	Ruth Traugot, R.N.
INSTITUTION:	Brookdale Community College, Lincroft, N.J.
INTENDED STUDENTS:	Nursing (2nd semester)
ESTIMATED WORKING TIME:	30 minutes
MATERIALS NEEDED:	None
REVISED:	July 1, 1977

Prerequisites: Knowledge of vital signs, the cardiovascular system and respiratory system.

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INTRODUCTION

The patient in Shock may be in danger of imminent death. It is, therefore, of vital importance that you learn as much about this phenomenon as possible. Your mastery of this information may save his life.

I am sure you will want to know some of the underlying causes of shock and to be able to identify the degree of shock (early or advanced) a patient may be experiencing.

By the time you complete this package, you will be able to:

1. Identify what occurs in eight different varieties of shock and recognize the signs and symptoms of early and advanced shock;
2. Given hypothetical situations, distinguish between early and advanced shock and state expected changes in vital signs and body functions.

You will find that the information you need to know is not as difficult as it may seem at first. I feel sure that you will master it.

PRACTICE EXERCISE #1

Four types of shock are caused specifically by problems in the circulatory system. These are hypovolemic, cardiogenic, vasogenic and obstructive shock.

1. In hypovolemic shock there is a reduction in the volume of circulating blood or a large loss of other body fluids. Examples - hemorrhaging, protracted vomiting, severe diarrhea, severe burns with large amounts of fluid seepage.

2. In cardiogenic shock something went wrong with the pumping action of the heart. Example - Myocardial Infarction in which there is a blockage in a coronary artery which impairs heart function.

3. In vasogenic shock the amount of circulating blood is not diminished but the blood vessels dilate, pooling the blood and making it unavailable for adequate supply to all tissues. Anaphylactic reactions are an example of this type of shock. These reactions can cause cardiac arrhythmias and vascular collapse.

4. In obstructive shock proper circulation is interrupted because of an obstruction in a major artery. Example - an embolism in a pulmonary artery.

Practice Question #1

Indicate which variety of shock would result from the following situations and tell what has occurred:

a. a myocardial infarction?

b. a pulmonary artery embolism?

c. a hemorrhage?

PRACTICE EXERCISE #1 (cont'd)

Feedback

a. cardiogenic shock caused by some impairment in the heart's pumping action

b. obstructive shock caused by an obstruction in a major artery

c. hypovolemic shock caused by a loss of whole blood or other body fluids

How did you do? All correct? Swell.

Please start on the next section. For those of you who need a little more time, please take it now and then continue to the next section.

PRACTICE EXERCISE #2

Fortunately, we see few patients in Septic Shock, particularly since antibiotics and other anti-infective medications are available. This type of Shock is caused by any overwhelming bacterial infection.

Endocrine Shock is usually caused by an overproduction or overdose of a hormone. The most common illustration is Insulin Shock. You will learn a great deal about this condition later on in your courses. I will not hold you responsible for any specific information about this condition.

Neurogenic Shock can result from intracranial damage or following the use of certain drugs. A severe head injury may throw the patient into neurogenic shock.

When a person experiences very severe pain or any strong emotion, vascular changes take place - heart rate slows down, reducing arterial pressure and cardiac output. This may cause psychic shock.

You may know people (or yourself?) who have severe reactions to"bug bites," pollens, foods, animals or drugs. After exposure, if not treated swiftly and correctly, some of these people may go into shock. Some may even die. This type of shock is called Anaphylactic Shock. The individual reacts immediately and violently to a foreign substance to which he has become sensitized or allergic through previous exposure.

Practice Question #2

A person is bitten by a wasp on his right hand. After a few minutes he begins to experience severe pain and there is an accompanying swelling of the hand which increases greatly in a short period of time. He goes to the hospital.

In the Emergency Room he is immediately given an injection of Tetanus Antitoxin after his wound is cleansed. After being treated he answers some questions. He now informs the doctor that he has many allergies, including a sensitivity to horse serum.

Which variety of Shock might you expect him to manifest? What would be the causative agent?

PRACTICE EXERCISE #2 (cont.)

Feedback

Anaphylactic shock resulting from his exposure to a foreign substance to which he has become sensitized or allergic. (In this case it might be the protein either in the serum of the horse or in the stinger of the wasp -- or the combination of both.)

Did you recognize this situation as being familiar to you? If you answered the problem correctly, continue to the next section where we get into more of the "meat".

PRACTICE EXERCISE #3

Some things must not only be learned by using reason but must also be memorized so that you can spin off the information almost without thinking, like a reflex action. This is true about learning the signs and symptoms of early shock when something can be done to prevent severe damage to the person. You must know and be able to recognize these early signs and symptoms. Let us go over them together so that you do not skip any.

1. B/P begins to go down
2. Pulse rate increases and may become thready
3. Pulse pressure begins to narrow
4. Respiration rate increases; air hunger and dyspnea may be present
5. Body temperature frequently is subnormal because of diaphoresis.
   Exception - Septic Shock.
6. Skin is cool, pale and diaphoretic.
   Exception - Septic Shock ("warm shock")
7. Unusual thirst may be present
8. Mental confusion
9. Anxious facial expression } these may be the first clues that shock is imminent
10. Dilated pupils

Practice Question #3

Hypothetical situation:

A patient manifests the following signs and symptoms of early shock -

Mental confusion
Anxious facial expression
Dilated pupils
Unusual thirst

What changes would you find in:

a. the remaining vital signs?

b. the pulse pressure?

c. the color and condition of the skin?

PRACTICE EXERCISE #3 (cont.)

Feedback

a. B/P ↓

P ↑ and thready

R ↑ dyspnea may be present - air hunger is also present

b. Pulse pressure begins to narrow

c. The skin becomes pale, cool and diaphoretic

This section was a bit more difficult. If you got it the first time -- very good. Continue to the last section. For those who need more time, please take it because the material must be mastered before you continue.

PRACTICE EXERCISE #4

The rate at which shock progresses varies depending on the underlying cause, the specific characteristics of the patient and the point at which the early signs are detected. As shock advances, some of the early signs and symptoms intensify and other signs appear.

1. Extremely low arterial pressure is associated with a decreased systolic pressure and an increased diastolic pressure.

2. Pulse pressure is now very narrow.

3. Urine flow will cease (anuria).

4. Decrease in cardiac output

5. Decrease in blood flow

6. Slowly moving blood which is poor in oxygen content causes cyanosis - a bluish or grayish skin discoloration seen on the lips, finger tips and nails, and ear lobes.

7. Respiration rate decreases causing damage to all tissues and organs because of lack of oxygen.

8. In advancing shock the patient becomes increasingly apathetic, listless, stuporous and finally lapses into coma.

Practice Question #4

Hypothetical situation:

A patient is cyanotic, his nails look bluish-gray, his respirations are decreased and deep and he is in a coma. These are signs of a deeper state of shock. In this state, what also occurs to:

a. the flow of urine?

b. arterial pressure?

c. condition of body cells and body organs?

d. pulse pressure?

PRACTICE EXERCISE #4 (cont.)

Feedback

a. urine flow may cease

b. arterial pressure becomes extremely low

c. body cells and tissues are damaged because of decrease in oxygen

d. pulse pressure is very narrow

Congratulations! You've come a long way, baby! The Post-Test should present no problem to you at all.

POST-TEST

1. Which four of the eight categories of Shock deal most specifically with the heart and blood vessels?

2. Hypothetical situation:

   A patient manifests the following --

   unusual thirst, mental confusion, body temperature slightly below normal range, dilated pupils and has an anxious expression.

   a. Are these signs and symptoms of early or advanced shock?

   b. Indicate what occurs in this state of shock to the other vital signs, the skin and the pulse pressure.

      1.

      2.

      3.

      4.

      5.

3. Hypothetical situation:

   The patient is cyanotic, comatose with anuria.

   a. Are these signs and symptoms of early or advanced shock?

   b. Indicate what occurs in this degree of shock to the structure of cells and organs, cardiovascular and pulmonary function, arterial pressure and respirations.

      1.

      2.

      3.

      4.

      5.

      6.

POST-TEST ANSWER KEY

1. a. Hypovolemic
   b. Cardiogenic
   c. Vasogenic
   d. Obstructive

2. a. These are signs and symptoms of early shock.

   b. (1) Blood pressure goes down

      (2) Pulse rate goes up and may become thready

      (3) Dyspnea and air hunger may be present

      (4) Pulse pressure narrows

      (5) The skin becomes pale, cool and diaphoretic

3. a. These are signs and symptoms of advanced Shock (in addition to cyanosis, coma and anuria).

   b. (1) Tissue anoxia may cause cell and organ damage

      (2) Cardiovascular function is impaired

      (3) Pulmonary function is interfered with

      (4) Arterial pressure is extremely low

      (5) Respirations decrease in rate and are deep

      (6) Skin is cyanotic, especially on lips, ear lobes and tips of fingers and nails.

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1. Smith and Germain. Care of the Adult Patient - Medical - Surgical Nursing. 4th ed., J. B. Lippincott Co., Phila., 1975, pp. 1046-48 (1st column), 1049 (starting with Clinical Assessment) - 50 (stop at CVP), 1052 (starting with Peripheral Vascular Resistance) - 54 (stop at Treatment). Also pp. 123-4 (Anaphylactic Reactions).

2. Trainex Corp. program #PC 228 - Introduction to Shock. (Brookdale's Learning Resources Center Catalog Number is SFS #710) frames 1-41.

3. Taber's Cyclopedic Medical Dictionary. F.A. Davis Co., Phila.

ANSWER SHEET TO PRACTICE QUESTIONS

1. a.

   b.

   c.

2.

3. a.

   b.

   c.

4. a.

   b.

   c.

   d.

ANSWER SHEET TO POST-TEST

1. a.

   b.

   c.

   d.

2. a.

   b.

3. a.

   b.

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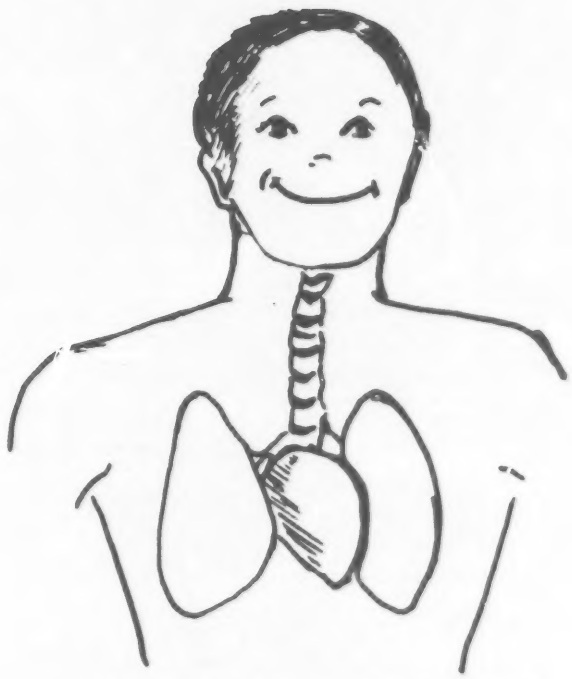
A PROJECT OF THE LEAGUE FOR INNOVATION IN THE COMMUNITY COLLEGE

SPECIFIC CLINICAL SYMPTOMS OF RESPIRATORY DISORDERS

By

Elizabeth J. Naugle, R.N., M.S.

Lauren Richardson, Illustrator



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TITLE OF PACKAGE:	Specific Clinical Symptoms of Respiratory Disorders
AUTHOR:	Elizabeth J. Naugle, R.N., M.S.
INSTITUTION	West Valley Community College Saratoga, Calif.
INTENDED STUDENTS	Entry level health care personnel
ESTIMATED WORKING TIME:	30 minutes
MATERIALS NEEDED:	None
REVISED:	October 1, 1977

Prerequisites: For effective use of this unit, the student should have knowledge of:

- Respiratory anatomy and physiology
- Medical asepsis
- Respiratory asepsis
- Introductory charting

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INTRODUCTION

Health care personnel frequently care for individuals with more than one medical problem. Respiratory disorders may be encountered alone as the primary problem or accompanying other medical problems. They are caused by interference with the normal anatomical respiratory structure, or by micro-organisms in the nose, throat, and lungs. A continuous exchange of oxygen and carbon dioxide is necessary for life. It is important, therefore, that health care personnel are able to recognize and report the specific clinical symptoms of respiratory disorders so that the client may receive treatment as needed.

A glossary to terms is available in Appendix "A" of those words which may not be familiar (Page 13).

OBJECTIVES OF UNIT

Overall Objective

Given a client in a health care setting, the student will be able to report the specific clinical symptoms of respiratory disorders.

Sub-Objectives

1) Identify specific clinical symptoms indicative of a respiratory disorder.

2) Report or record clinical respiratory symptoms requiring medical attention.

3) Identify clinical respiratory symptoms that may indicate sources of infection.

4) Describe environmental factors contributing to respiratory disorders.

PRACTICE EXERCISE #1

There are many disorders that interfere with the exchange of oxygen and carbon dioxide in the respiratory system. They may be short-term or long-term, affect either the upper airway (nose, mouth pharynx), or lower airway (larynx, trachea, bronchi, and lungs), or both. Respiratory disorders can also be caused by abnormalities of the chest wall, respiratory muscles, or respiratory center in the brain. Many respiratory diseases may be transmitted to other individuals.

The clinical symptoms of respiratory disorders are: cough, abnormal breathing, chest pain, abnormal chest movements, cyanosis, abnormal sputum, and hemoptysis.

Practice Question #1

Given the following symptoms, circle those which are specific to a respiratory disorder:

Cyanosis	Sweating
Cough	Abnormal sputum
Weight loss	Chest Pain
Fatigue	Abnormal Breathing
Fever	Anorexia
Hemoptysis	Weakness
Malaise	Abnormal Chest Movements

Feedback

Cyanosis

Cough

Weight loss

Fatigue

Fever

Hemoptysis

Malaise

Sweating

Abnormal Sputum

Chest Pain

Abnormal Breathing

Anorexia

Weakness

Abnormal Chest Movements

PRACTICE EXERCISE #2

A	Breathing rate	Normal 16-20/min	N	More than 24	Y	Less than 16	Y
B	Cough	Seldom	N	constant	Y	Changing	Y
C	Chest pain	Occasionally	Y	Sharp, stabbing	Y	Dull, aching constant	Y
D	Chest movement	Both sides expand equally	N	One side moves differently from other	Y	Muscles between ribs pull in on breath	Y
E	Sputum	Normal thin, watery clear	N	Thick, yellow or green	Y	Rusty color or large amount	Y
F	Hemoptysis	Occasional flecks of blood in sputum	Y	Frequent flecks of blood in sputum	Y	Coughing up blood	Y
G	Skin color	Normal for race	N	Bluish (cyanosis)	Y	Very pale	Y

Requires Medical Attention: Y = Yes
N = No

Please look at the chart above. Notice that the seven clinical symptoms that you have been studying are listed on the left side of the chart. Each column on the right lists CHARACTERISTICS of the symptom.

There are some similar observations you can make. Notice that chest pain (C) and hemoptysis (F) must ALWAYS be reported. The breathing rate (A) and cough (B) are reported for further medical attention when they increase, decrease, or change. Sputum (E) and skin color (G) are reported when a color change from normal is seen. Unequal or variations in the way the chest expands or moves on breathing must also be reported.

Practice Question #2

Write a description of the CHARACTERISTICS of the clinical symptoms that require medical attention. Begin by listing each symptom, then follow it with the characteristics that require medical attention.

This is a tough question, so you may want to take extra time to restudy the chart before answering.

Feedback

Breathing rate: more than 24 or less than 16.

Cough: constant or changing.

Chest pain: occasionally, or sharp, stabbing, dull, aching, constant.

Chest movement: one side moves differently from the other; muscles between ribs pull in on breath.

Sputum: thick, yellow or green; rusty color or large amount.

Hemoptysis: occasional flecks of blood in sputum, frequent flecks of blood in sputum, or coughing up blood.

Skin color: bluish (cyanosis) or very pale.

PRACTICE EXERCISE #3

Some symptoms - ordinary coughing. hemoptysis, presence of sputum - mean we should follow aseptic techniques carefully to avoid infection.

Practice Question #3

Given the following symptoms, put an "I" in front of those symptoms that may require protective measures to avoid infection. Place a "N" in front of those that may not be infectious symptoms.

_____ Cough

_____ Cyanosis

_____ Chest pain

_____ Hemoptysis

_____ Sputum

_____ Abnormal breathing

_____ Abnormal chest movements

Feedback

I	Cough
N	Cyanosis
N	Chest pain
I	Hemoptysis
I	Sputum
N	Abnormal breathing
N	Abnormal chest movements

PRACTICE EXERCISE #4

Our lungs respond to irritating substances in two ways: increased production of secretions, and coughing. Both responses are the body's attempts to soothe the irritated mucous membrane.

Irritants found in our environment - smoke, auto exhausts, factory fumes, dust, gasoline fumes, and others - are among those which cause this body irritation.

Practice Question #4

Think of some common environmental irritants. Either draw cartoon pictures or describe at least two of these society-caused environmental factors that contribute to respiratory disorders.

Feedback

Common examples are:

Tobacco smoke
Automobile exhausts
Factory fumes
Pollen
Dust
Glue fumes
Aerosols
Fumes from paint and thinner
Gasoline fumes
Fumes from household cleaners.

You probably thought of a number of others.

POST-TEST

Mr. W. is a 56-year-old Caucasian male, living alone, who is receiving the services of a health worker because of a fractured left hip. During the time the health worker is present in the home, Mr. W. coughs frequently, bring up large amouts of thick sputum. His respiratory rate is 28, skin color is bluish. He is a chain smoker. Occasionally flecks of blood appear in the sputum. Mr. W. tends to hold his chest when coughing, explaining that it hurts. His chest moves equally on both sides. He tires easily, and has little appetite.

Given the above clinical situation, answer the following questions (refer to the glossary on Page 13 if you need help with spelling the technical terms):

1. List six specific clinical symptoms indicating a respiratory disorder that Mr. W. exhibits.

2. Record or report those respiratory symptoms Mr. W. has that require medical attention.

3. List observed clinical respiratory symptoms that may transmit infection.

4. Describe a contributing environmental factor of respiratory disorders that affects Mr. W.

ANSWERS TO POST-TEST

1. Cough
   Abnormal sputum
   Chest pain
   Hemoptysis
   Abnormal breathing
   Cyanosis

2. Sputum flecked with blood
   Chest pain on coughing
   Frequent cough
   Thick sputum
   Respiratory rate of 28
   Skin color bluish

3. Cough
   Sputum
   Hemoptysis

4. Heavy smoking

APPENDIX A

GLOSSARY OF TERMS

Anorexia - absence of appetite.

Asepsis - free of germs.

Cyanosis - bluish skin color.

Fatigue - tiredness, weariness.

Hemoptysis - coughing of blood from the respiratory tract.

Malaise - discomfort, uneasiness.

Sputum - thin, watery secretion produced by mucous membrane of respiratory tract.

Transmit - to carry from one person to another.

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POSTOPERATIVE RESPIRATORY COMPLICATIONS

by

Jan F. Zlotnick, R.N.

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TITLE OF PACKAGE:	Postoperative Respiratory Complications
AUTHOR:	Jan F. Zlotnick
INSTITUTION:	Santa Fe Community College Gainesville, Florida
INTENDED STUDENTS:	Nursing
ESTIMATED WORKING TIME:	30 minutes
MATERIALS NEEDED:	None
REVISED:	September 1, 1977

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INTRODUCTION

Postoperative respiratory complications can be life-threatening. When your patient is threatened by lack of air, you, the nurse, need to know what's going on!

When you've completed this unit, you'll be able to define and identify three main respiratory complications that might affect your postoperative patient.

You'll find that you're able to:

define the common medical terminology associated with these complications;

describe the symptoms that go with these respiratory problems; and

identify the three major conditions in case studies.

This is a programmed text. The answer column at the right of each page should be covered as you answer the questions, then uncovered as you check your response.

Answer

Are you ready to go? O.K. First of all, let me tell you that there are three major respiratory complications that may affect your postoperative patient. These are bronchitis, atelectasis and pneumonia. Look at them closely, because in a minute I'm going to ask you to repeat them without looking. Spelling is important in all medical terminology, so get them down before moving on. The three major respiratory complications that may affect your postoperative patient are: 1)_____.

1) bronchitis atelectasis, pneumonia.

Atelectasis is a condition in which a portion of a lung becomes blocked, causing that portion to fail to expand. Now, imagine that you've just inhaled (aspirated) a piece of food. You're probably coughing, having difficulty breathing (dyspnea) and feeling some pain in your chest. Your fingers, toes or lips may be turning blue (cyanosis), too. Imagine how frightening it can be for a postoperative patient.

So, atelectasis is a condition in which 2)_____, and some of its symptoms are 3)_____ _____.

2) Portion of a lung becoming blocked, causing this portion to fail to expand.

3) Dyspnea, coughing, pain, cyanosis.

Since in atelectasis the portion of lung below the blockage cannot expand, this condition is often referred to as collapsing part of a lung. This reduction in the intake of oxygen is what causes the cyanosis (blueness) in various body parts.

So, now you know that another name for atelectasis is 4)_____, and that this may cause 5)_____of various body parts.

It is important to remember that a postoperative patient is often very sedated and that anesthesia can cause nausea and vomiting. Aspirating (inhaling) vomitus (emesis) is a common cause of atelectasis. If enough emesis is aspirated oxygen intake can be reduced to the point of causing death!

Let's review quickly.

Atelectasis is a condition in which 6)_____ _____. Its symptoms include 7)_____ _____, and a common postoperative cause of atelectasis is 8)_____.

A condition which is often caused by atelectasis is pneumonia. The word pneumonia refers to any infection of the lungs. Blocking a part of a lung

Answer

4) collapsing part of a lung

5) cyanosis

6) a portion of a lung becomes blocked and fails to expand.

7) dyspnea, cyanosis, pain, coughing

8) aspirating vomitus (emesis)

increases the chance of infection. Pneumonia can cause any or all of the symptoms that go with atelectasis. Dyspnea (difficulty breathing) and coughing are almost always present. In addition, thick sputum (phlegm) is often coughed up and fever is usually present. So, suppose your patient shows all the signs of atelectasis, which are 9)_____, plus has a fever and is coughing up sputum. He probably has 10)_____, which refers to 11)_____.

Answer

9) dyspnea, cyanosis, pain, coughing

10) pneumonia

11) any infection of the lungs

A sedated patient, or one that is in postoperative pain is less likely to breathe as deeply as normal. Bacteria and viruses can grow undisturbed in the deep, dark moist regions of the lungs when a person's breathing is shallow or when atelectasis occurs; and inactivity makes the patient even <u>more</u> susceptible to infection.

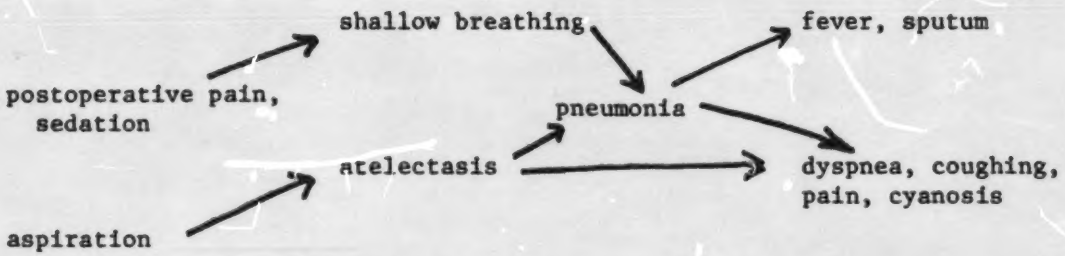
Thus, three causes of postoperative pneumonia are 12)_____, and two causes of shallow breathing are 13)_____. Pneumonia refers to 14)_____.

12) shallow breathing, atelectasis, inactivity.

13) sedation, pain

14) any infection of the lungs.

To review:



The third main respiratory complication in postoperative patients is bronchitis. The word bronchitis refers to any inflammation of the bronchi or bronchioles, respectively the larger and smaller airways in the lungs. There are many causes of bronchitis, but we are only concerned here with its relation to postoperative patients. By the way, can you now list the three main postoperative respiratory complications?

15)_____.

Answer

15) atelectasis, pneumonia, bronchitis

Postoperative bronchitis is often a result of irritation by anesthetic gas. All the symptoms of pneumonia may be present, but usually dyspnea is the major symptom. Some patients are sensitive to anesthetic gases, and their medical histories may indicate this. In addition, the cough in postoperative bronchitis is usually dry at first and

Answer

transient unless irritation persists. With pneumonia, the cough usually persists. Coughing and dyspnea that are present immediately after surgery that were not there prior to surgery will usually indicate postoperative bronchitis.

Now then, though bronchitis may resemble pneumonia, its major symptom is 16)_____ _____ and the associated cough is usually 17)_____. Bronchitis is 18)_____.

16) dyspnea
17) dry
18) inflammation of bronchi or bronchioles.

How are you doing? You might be thinking that since bronchitis can sometimes resemble pneumonia, then it follows that it can also resemble atelectasis. Confusing? Well, it's not always certain which condition is affecting your patient until further tests are done. But you can identify many things now. You know that the main symptom of bronchitis is 19)_____ and any coughing associated with it will probably be 20)_____.

19) dyspnea
20) dry

Now in atelectasis, four symptoms are usually present: 21)_____, _____, _____, _____. In addition, postoperative bronchitis is often a result of 22)_____, and its symptoms 23) were/were not present prior to surgery.

21) dyspnea, coughing, cyanosis, pain
22) anesthetic gas
23) were not

Pneumonia may show all the signs of atelectasis, but in addition 24)_____ and 25)_____ are usually present.

24) fever
25) thick sputum (phleg in cough

Now try the post-test and see how you do.

POST-TEST

1. List the three main postoperative respiratory complications:

   a. _____.

   b. _____.

   c. _____.

2. Define bronchitis.

3. Your patient, Perry Neal, has aspirated some food, collapsing a part of his lung. This condition is known as _____.

4. Pneumonia is:
   a. an infection caused by deep breathing
   b. a condition often related to atelectasis
   c. a condition related to circulatory problems.

5. An infection of the lungs is called _____.

6. Aspiration of vomitus may cause which of the following:
   a. atelectasis
   b. fever
   c. pneumonia
   d. death
   e. cyanosis
   f. a. only
   g. all the above

7. Polly Uria, a post-surgical patient, is coughing up a large amount of thick sputum. As his nurse, you are wary that he might have:
   a. pneumonia
   b. atelectasis
   c. emesis
   d. bronchitis

8. All are signs of pneumonia except:
   a. fever
   b. frequent coughing
   c. emesis
   d. dyspnea

9. Sid Dation, a postoperative patient, complains of some dyspnea that was not present prior to surgery. You find that he has no fever and is not coughing up any sputum. You also learn that he has a history of similar symptoms after any procedure requiring anesthesia. You assess that he now has _____.

10. Which of the following statements is false:
    a. Shallow breathing or atelectasis can cause postoperative pneumonia.
    b. Coughing up sputum indicates atelectasis.
    c. Inactivity makes a patient more susceptible to infection.
    d. Pain and sedation can cause shallow breathing.

POST-TEST ANSWER KEY

1. Bronchitis, pneumonia, atelectasis
2. inflammation of bronchi
3. atelectasis
4. b
5. pneumonia
6. g
7. a
8. c
9. bronchitis
10. b

ANSWER SHEET TO PRACTICE QUESTIONS

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

ANSWER SHEET TO PRACTICE QUESTIONS (cont.)

15.

16.

17.

18.

19.

20.

21.

22.

23.

24.

25.

ANSWER SHEET TO POST-TEST

1. a.

   b.

   c.

2.

3.

4.

5.

6.

7.

8.

9.

10.

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